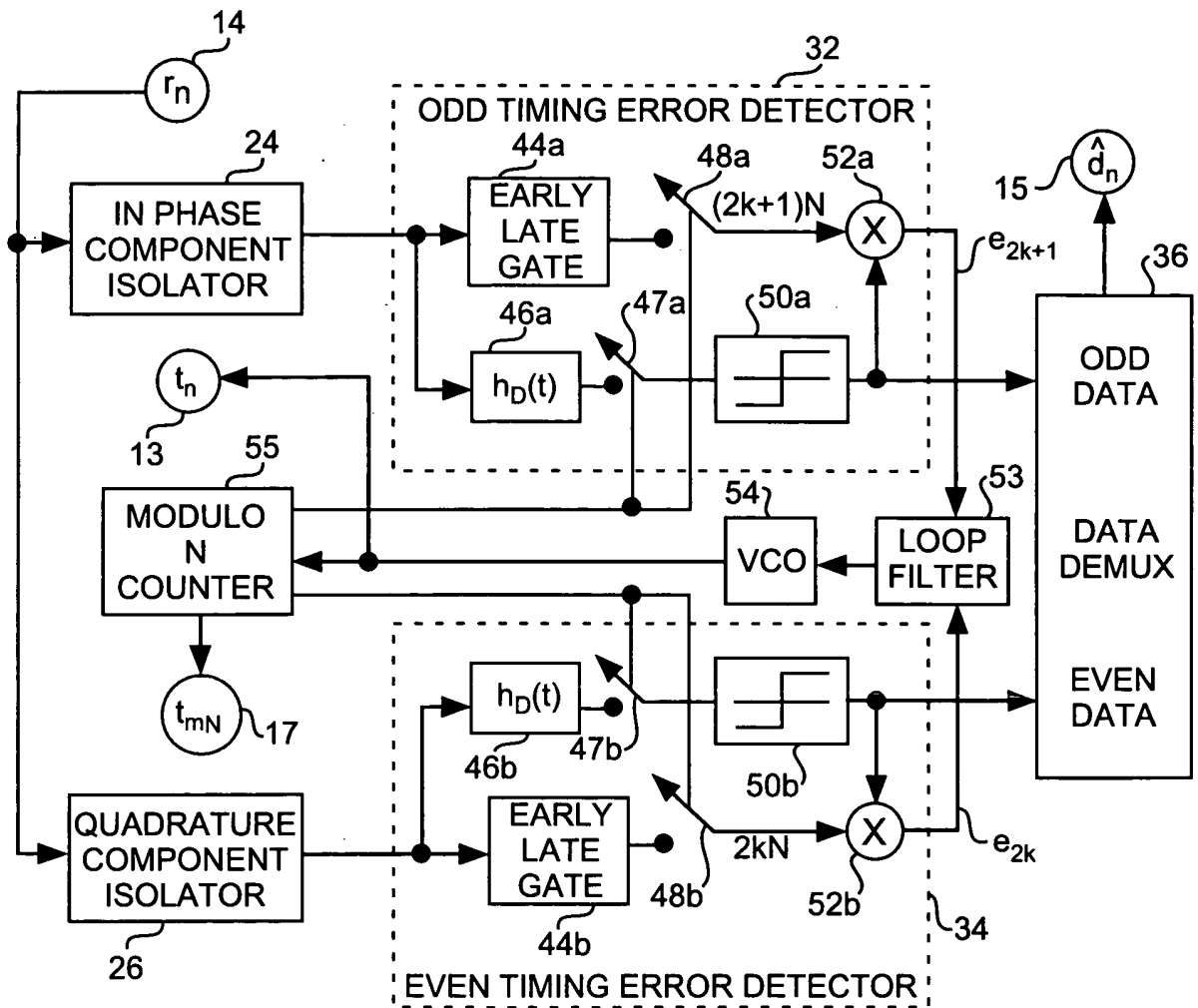


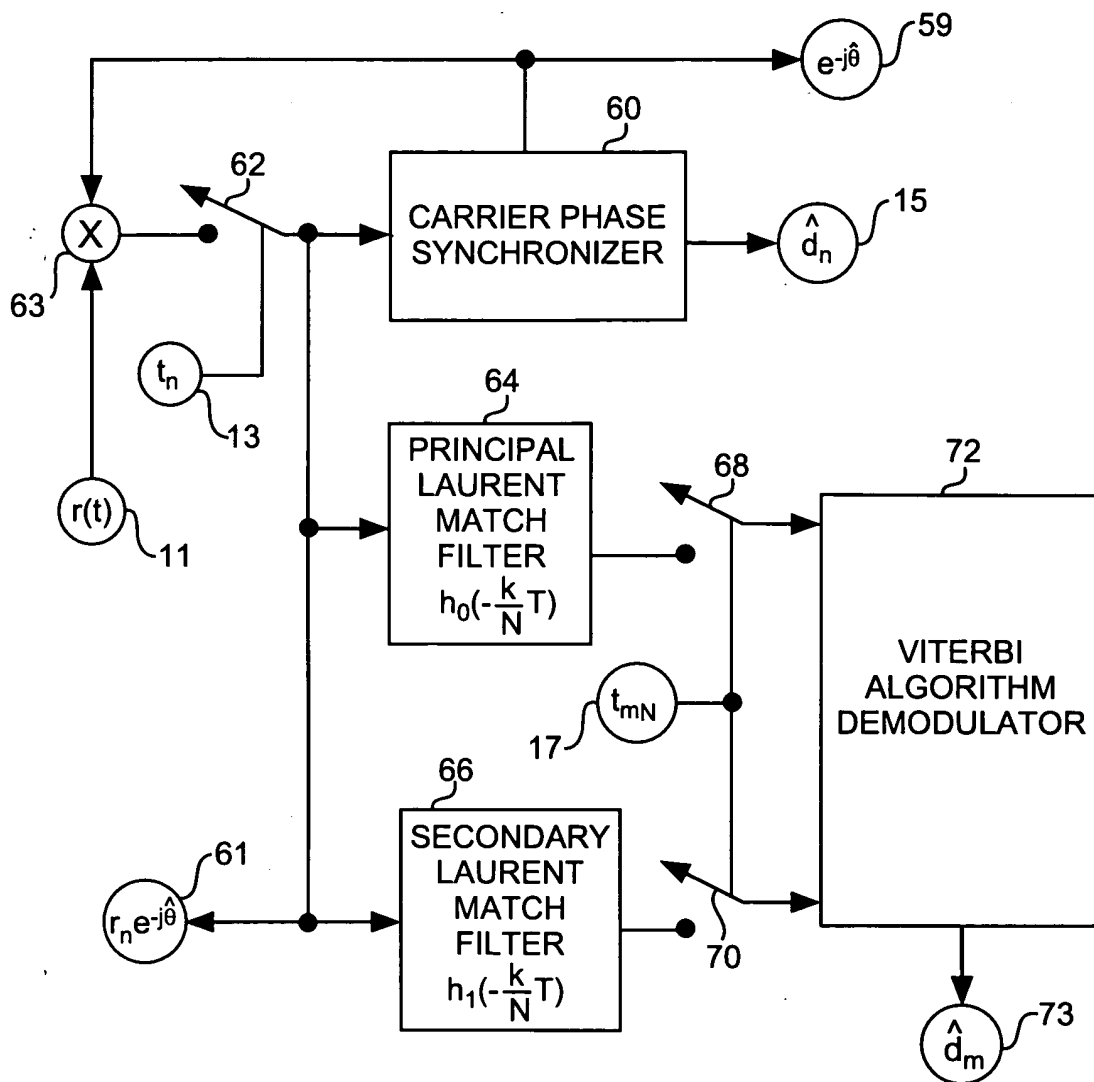
SYMBOL TIME SYNCHRONIZED DATA DEMODULATOR

FIG. 1A



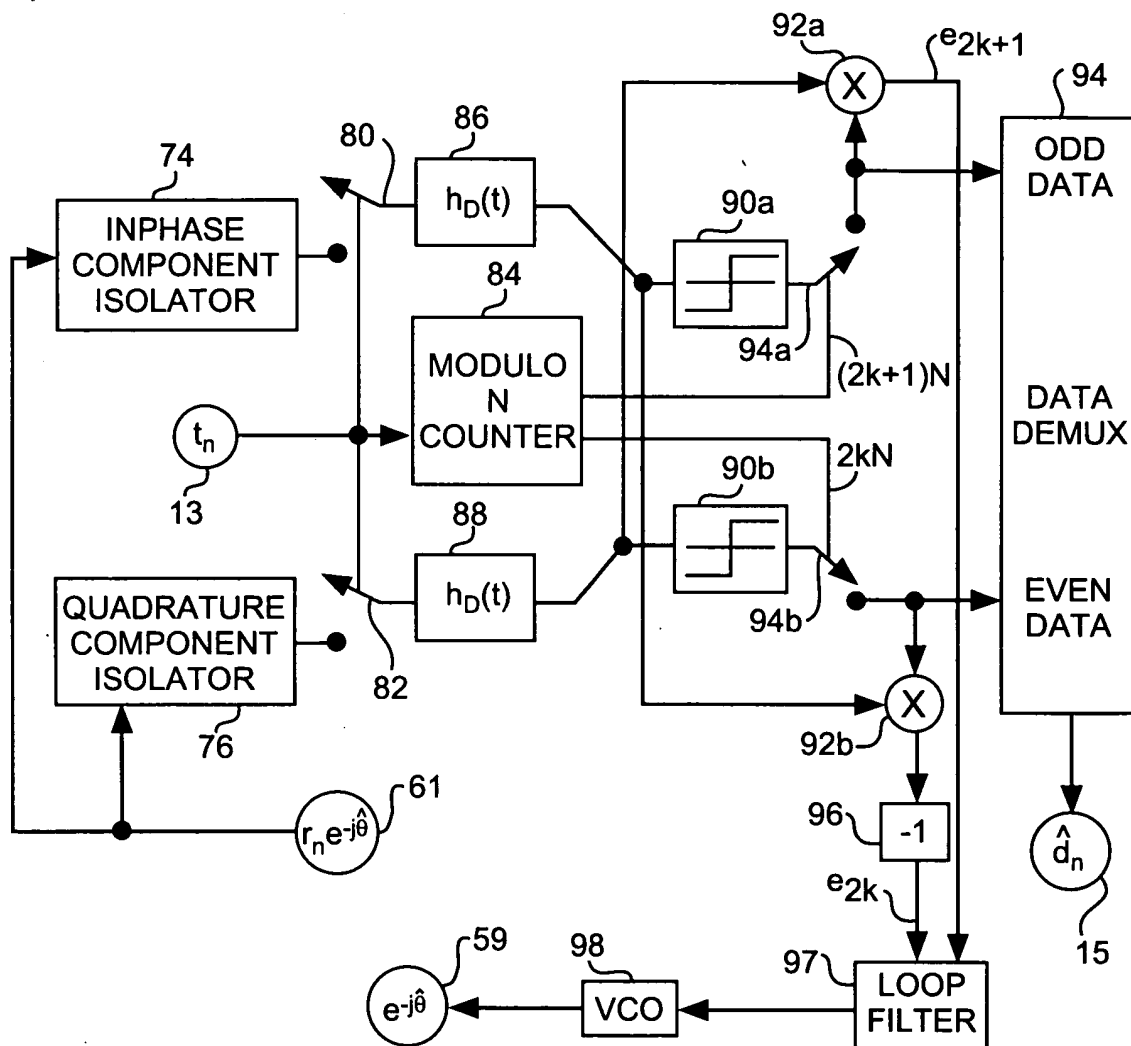
SYMBOL TIME SYNCHRONIZER

FIG. 1B



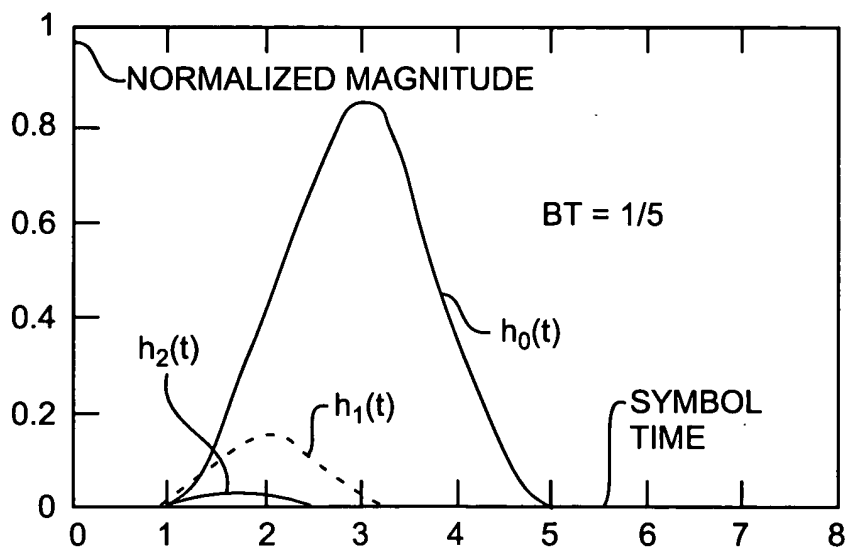
CARRIER PHASE SYNCHRONIZED DATA DEMODULATOR

FIG. 2A



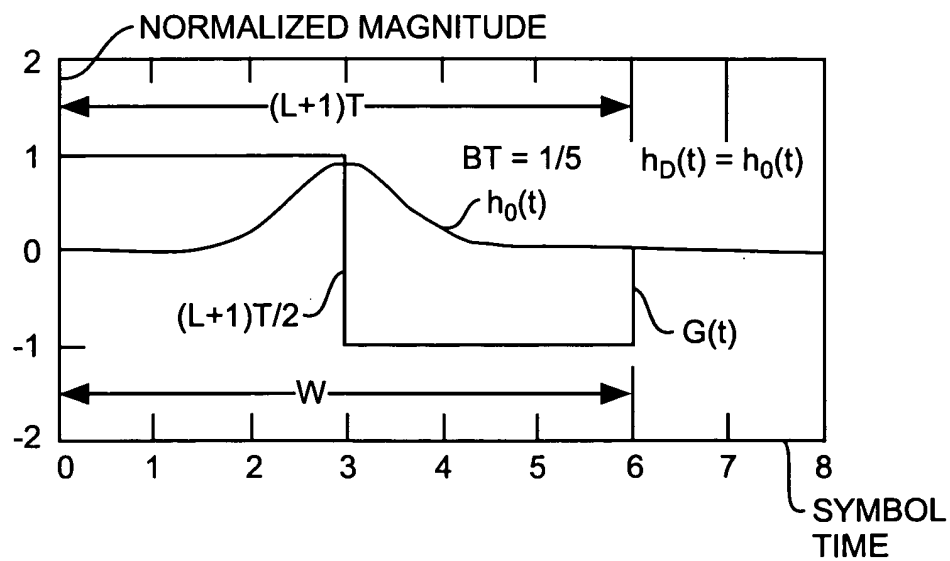
CARRIER PHASE SYNCHRONIZER

FIG. 2B



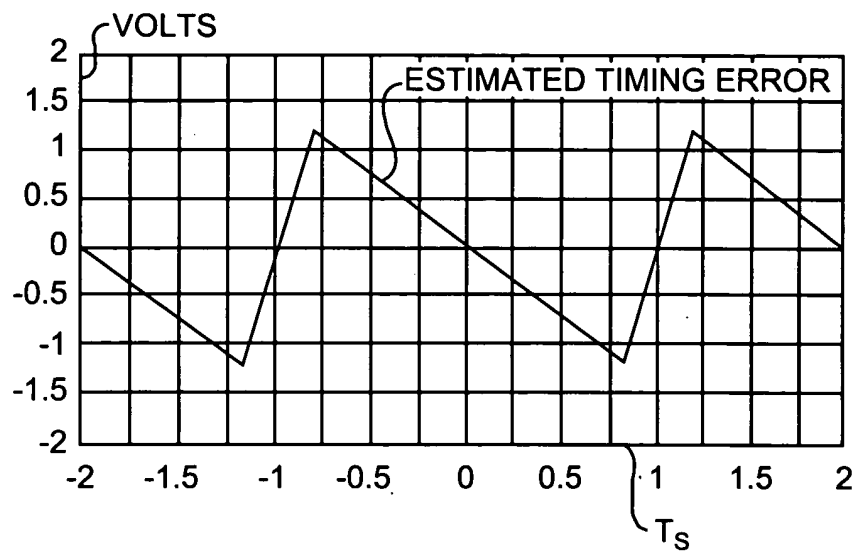
LAURENT PULSE FUNCTIONS

FIG. 3



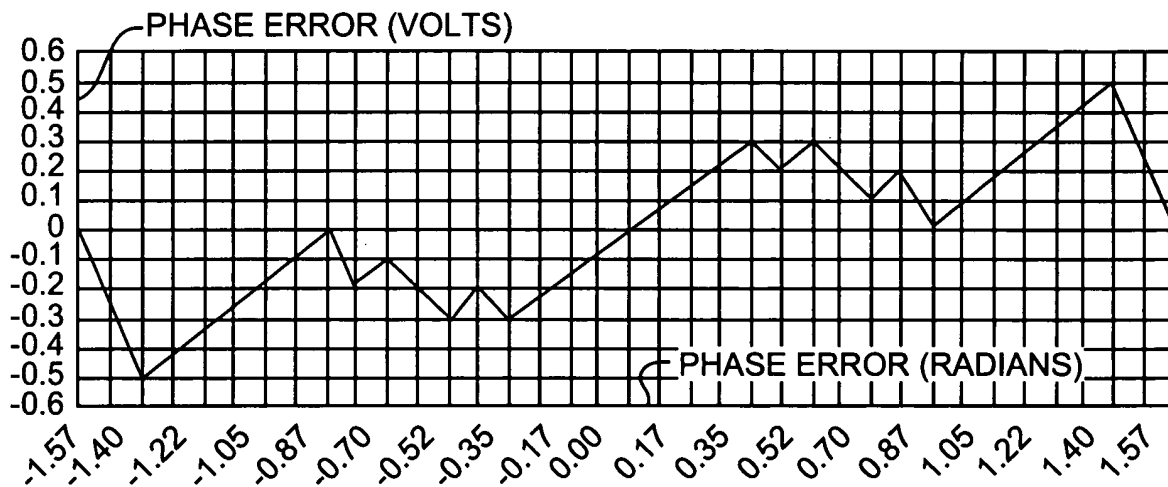
EARLY-LATE GATE FUNCTION

FIG. 4



SYMBOL TIMING ERROR DISCRIMINATOR CURVE

FIG. 5



CARRIER PHASE ERROR DISCRIMINATOR CURVE

FIG. 6